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ABSTRACT

For 3.5 years, North Carolina has conducted a randomized experimental program designed to provide intensive supervision services for undisciplined youths (status offenders) placed under the protective supervision of the juvenile courts. Updated results from an ongoing systematic evaluation of the project indicate that, for undisciplined youths with no prior history of court referrals for delinquent acts, the Intensive Protective Supervision Program provides a reduction of 15 to 20 percent in the rate of progression to delinquent offenses during the supervision period and a cumulative (supervision period plus up to one year after supervision) reduction of 25 to 30 percent relative to the corresponding rates observed for youths in regular protective supervision. Experimental results also indicate: that early intervention (i.e., for status offenders who have not yet been referred to the courts for delinquent acts) facilitates reduction in subsequent delinquent behavior; that the reduction occurs primarily in referrals for nonfelony delinquent offenses; that there also are intensive supervision effects on reducing the runaway and truancy offense recidivism rates; that intensive supervision has a longer lasting (post-supervision period) effect than regular supervision; that measurement scales can be developed for predicting which characteristics of a youth client and her/his family are likely to lead to success in the intensive supervision program; and that, for the continuing effectiveness of intensive supervision, it may be essential to provide counselors with periodic morale-boosting attention and training in counseling and therapeutic methods to guard against the possibility of counselor burnout. (Author)

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THE NORTH CAROLINA COURT COUNSELOR'S INTENSIVE SUPERVISION EXPERIMENT, PHASE III:

Final Evaluation Report

May 31, 1991

Prepared for the
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COURT COUNSELOR'S INTENSIVE SUPERVISION EXPERIMENT, PHASE III:

Final Evaluation Report

Executive Summary

For three and one-half years, North Carolina has conducted a randomized experimental program designed to provide intensive supervision services for undisciplined youths (status offenders) placed under the protective supervision of the juvenile courts. Updated results from an ongoing systematic evaluation of the project indicate that, for undisciplined youths with no prior history of court referrals for delinquent acts, the Intensive Protective Supervision Program provides a reduction of 15 to 20 percent in the rate of progression to delinquent offenses during the supervision period and a cumulative (supervision period plus up to one year after supervision) reduction of 25 to 30 percent -- relative to the corresponding rates observed for youths in regular protective supervision. Experimental results also indicate: that early intervention (i.e., for status offenders who have not yet been referred to the courts for delinquent acts) facilitates reduction in subsequent delinquent behavior; that the reduction occurs primarily in referrals for nonfelony delinquent offenses; that there also are intensive supervision effects on reducing the runaway and truancy offense recidivism rates; that intensive supervision has a longer lasting (post-supervision period) effect than regular supervision; that measurement scales can be developed for predicting which characteristics of a youth client and her/his family are likely to lead to success in the intensive supervision program; and that, for the continuing effectiveness of intensive supervision, it may be essential to provide counselors with periodic morale-boosting attention and training in counseling and therapeutic methods to guard against the possibility of counselor burnout.

COURT COUNSELOR'S INTENSIVE SUPERVISION EXPERIMENT, PHASE III:

Final Evaluation Report

Introduction

For the past three and one-half years, North Carolina has conducted a randomized experimental program designed to evaluate the merits of providing intensive supervision services for undisciplined youths or status offenders placed under the protective supervision of the juvenile courts. By definition, an undisciplined youth is a juvenile less than 16 years of age who (a) has run away from home (i.e., is a runaway), (b) is unlawfully absent from school (i.e., is a truant), (c) is regularly disobediant to his parent, guardian, or custodian and beyond their disciplinary control (i.e., is ungovernable), or (d) is regularly found in places where it is unlawful for a juvenile to be. The essential idea of the Intensive Protective Supervision Project (IPSP) is that through the intensive supervision (by court counselors) and provision of professional services to status offenders it may be possible to decrease the rate of occurrence of additional status offenses and the likelihood that the youths will commit more serious delinquent offenses. Thus, as compared to regular protective supervision of status offenders by court counselors, the IPSP involves more extensive and proactive contact between the counselor, the status offender, and the status offender's family.

Since November, 1987, an experimental project has been conducted to assess whether or not Intensive Protective Supervision (IPS) achieves the goals of reducing undisciplined acts and progression to delinquent behavior relative to Regular Protective Supervision (RPS). This research has been supported by the State of North Carolina, Administrative Office of the Courts, Juvenile Services Division. Four juvenile court sites have participated in the

experimental project since November 1, 1987: District 10 (Wake County/Raleigh), District 18 (Guilford County/Greensboro), District 19A (Cabarrus and Rowan Counties/Concord and Salisbury), and District 28 (Buncombe County/Asheville). Beginning November 1, 1989, the experiment and its evaluation were expanded to four new sites from which data on small numbers of cases now are available: District 5 (New Hanover County/Wilmington), District 15A (Alamance County/Graham), District 23 (Wilkes County/Wilkesboro), and District 27A (Gaston County/Gastonia).

At each site, any youth adjudicated undisciplined after the starting date of the experiment who received a protective supervision disposition and who was not already under the court's supervision for a delinquent or undisciplined offense was put into a pool from which experimental (IPS) and control (RPS) group assignments were made. A key aspect of the experiment is that these assignments were made according to a well-defined randomized procedure. This random assignment of juvenile clients ensures that the experimental (treatment) and control (comparison) groups are approximately equivalent with respect to such extraneous client characteristics as age, sex, race, and personality characteristics. This, in turn, makes the statistical comparison of outcomes from the two groups more reliable and accurate. Randomization also makes more plausible the attribution of group differences in outcomes to the experimental treatment procedure.

Objective of the Report

Previously, the present project evaluation team has provided statistical impact assessments of the Intensive Protective Supervision Project after approximately 1.5 years of operation (Phase I Final Evaluation Report, dated June 1, 1989) and again after approximately 2.5 years of operation (Phase II

Final Evaluation Report, dated June 1, 1990) as well as at various intervening dates in Interim Evaluation Reports. Results from the Phase I impact and process evaluation also were published separately in a peer-reviewed evaluation research journal (Land, McCall, and Williams, 1990).

The purpose of the present Phase III Final Evaluation Report is to provide an updated statistical analysis of data from the Project as of May 15, 1991. Our updated tables now include results on all juvenile subjects processed through the Intensive (treatment, experimental) and Regular (control) Protective Supervision groups through mid-May 1991 -- which encompasses roughly 3.5 years of operation of the Project at the four original experimental sites and approximately 1.5 year of operation at the four new sites. The present document describes these tables and compares them with the tables in the June 1990 Phase II Final Evaluation Report and with similar tables in our March 1991 Phase III Interim Evaluation Report. In addition, a copy of a draft chapter based on our extended evaluation of the IPSP -- which is to be published separately -- is attached as Appendix A (Land, McCall, and Williams, 1991).

Statistical Description of the Clients

Table 1 contains relative frequency distributions (percentages) and raw frequency distributions (cell counts in parentheses) on all 464 experimental and control group cases for which we have data as of mid-May 1991. Note that all of these 464 client cases have been admitted into the Intensive Protective Supervision Experiment from November 1987 to this date, but, of these, only 360 have been closed. Closed cases are cases that have successfully completed the assigned supervision (usually for a six months-to-a-year period), aged-out of the program, moved out of the district, refused (or their parents refused)

Table 1. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Frequency Distribution on Selected Characteristics for all Cases as of May 1991.

	Experimental	Control	Total
Total Sample	52.4[a] (243)	47.6[a] (221)	100.0%(464)
District			
5, Wilmington	4.9[b] (12)	7.7[b] (17)	6.3[a] (29)
10, Raleigh	15.6 (38)	18.6 (41)	17.0 (79)
15A, Graham	5.8 (14)	7.2 (16)	6.4 (30)
18, Greensboro	20.6 (50)	20.9 (46)	20.7 (96)
19A, Concord/Salisbury	16.9 (41)	12.2 (27)	14.7 (68)
23, Wilksboro	9.9 (24)	9.0 (20)	9.5 (44)
27A, Gastonia	7.8 (19)	8.6 (19)	8.2 (38)
28, Asheville	18.5 (45)	15.8 (35)	17.2 (80)
Age			
7,8,10-12	13.1 (32)	8.1 (18)	10.7 (50)
13	16.0 (39)	19.9 (44)	18.0 (83)
14	38.8 (94)	39.4 (87)	39.0 (181)
15-16	32.1 (78)	32.6 (72)	32.3 (150)
Sex			
Female	68.3 (166)	69.2 (153)	68.8 (319)
Male	31.7 (77)	30.8 (68)	31.2 (145)
Race			
White	69.5 (169)	70.1 (155)	69.8 (324)
Black	28.9 (70)	29.4 (65)	29.1 (135)
Other	1.6 (4)	0.5 (1)	1.1 (5)
Reason Referred			
Runaway	52.7 (128)	52.9 (117)	52.8 (245)
Truancy	31.7 (77)	30.8 (68)	31.3 (145)
Ungovernable	15.6 (38)	16.3 (36)	15.9 (74)
Number of Prior Status Referrals			
0	80.3 (195)	85.5 (189)	82.7 (384)
1	15.2 (37)	11.3 (25)	13.4 (62)
2	3.3 (8)	2.3 (5)	2.8 (13)
3	1.2 (3)	0.9 (2)	1.1 (5)
Number of Prior Delinquent Referrals			
0	90.2 (219)	93.2 (206)	91.5 (425)
1	7.4 (18)	5.9 (13)	6.7 (31)
2	1.6 (4)	0.0 (0)	0.9 (4)
3	0.8 (2)	0.9 (2)	0.9 (4)

[a]As a percentage of total cases (464).
[b]As a percentage of total experimental cases (243).
[c]As a percentage of total control cases (221).

to continue participation, or been adjudicated delinquent on a subsequent petition to the court. For purposes of comparison, Table 2 reports the same frequency distributions for the closed cases as Table 1 does for all admitted cases. Much of the analysis below will be restricted to the closed cases.

Frequency distributions on the following client characteristics are given in Table 1 and Table 2: experimental versus control group assignment, district, age, sex, race, reason referred (to the juvenile court), number of prior status offense referrals, and number of prior delinquent referrals. The first rows exhibit the percentage and numerical allocations of clients to the experimental and control groups. The right-hand columns of the tables contain the relative frequencies as percentages of the total client sample as of mid-May 1991. The other two columns then give the corresponding relative frequencies as percentages of the total experimental and control cases. This facilitates comparisons of the frequency distributions within the latter two groups with those of the total sample.

As was the case in the June 1990 Phase II Final Evaluation Report, the distribution of admitted cases in Table 1 between the experimental and control groups remains roughly equal (52.4 percent in the experimental group and 47.6 percent in the control group). The distribution of cases among the four original sites also continues to remain relatively stable -- with District 18 (Greensboro) having the most (96) and District 19A (Concord/Salisbury) the least (68). Among the four new sites, Wilkesboro and Gastonia have the largest number of cases assigned at this point (with 44 and 38 cases, respectively) followed by Graham (30) and Wilmington (29).

With respect to the frequency distributions of personal characteristics of the juvenile clients (age, sex, race), it can be seen from Table 1 that the percentage differences between experimental and control groups usually are

small -- on the order of 3 percentage points or less. In general, various differences between the groups in the percent distributions on these characteristics that we have noted in previous reports have declined somewhat. This is consistent with a stabilization of the frequency distributions as the sample sizes increase under the operation of a proper random assignment procedure.

This narrowing of percentage differences between the two groups also extends to the court-related characteristics. In particular, the relative frequencies of the groups by reasons referred (to the juvenile court) are quite comparable. Similarly, the difference in percentages of the two groups who have had one or more prior referrals to the juvenile court for status offenses has narrowed from as high as 8 percent in previous reports to about 5 percent in Table 1. Finally, the difference in the percentages of clients having one or more prior delinquent court referrals has declined from as high as 6 percent in previous reports to 3 percent in Table 1.

Despite this general narrowing of differences between the groups, however, the percentage of clients with one or more prior delinquent referrals remains somewhat higher in the experimental than the control group (9.8 versus 6.8 percent, respectively). Numerically, there are 24 such cases in the experimental group versus 15 in the control group -- which means that the experimental group has 60 percent more cases (with one or more prior delinquent referrals) than does the control group. Even more significantly, the experimental group contains 6 cases with two or more prior delinquent referrals -- those with very high probabilities of additional delinquent offending -- compared to only 2 cases for the control group.

The foregoing comparisons of differences in the frequency distributions of cases by experimental versus control groups suggest that the two groups have

become more similar during the last year and a half with respect both to personal and court-related characteristics. Indeed, with the exception of the experimental group continuing to have somewhat higher percentages of "tough" cases (i.e., cases with higher-order prior offense histories that are more likely to recidivate with status and/or delinquent offenses), the groups are quite comparable. These differences are not large and could well be due to chance variation associated with the random assignment of cases to the experimental and control groups. They do suggest, however, that it is very important to remain sensitive in the outcome evaluation to these sources of heterogeneity in the experimental and control groups and to continue to analyze separately those groups that are as homogeneous as possible with respect to prior offense histories.

The frequency distributions for all closed cases reported in Table 2 are closely similar to those for all admitted cases in Table 1. Most of the percentages by specific characteristic differ by less than 2.0 between the two tables. The modal closed case in both the experimental and control groups is aged 14 to 16 (over 70 percent of cases), female (slightly over two-thirds of cases), white (also just over two-thirds of cases), and referred to the juvenile court for runaway or truant behavior (about 50 and 30 percent of cases, respectively). The fact that these modal characteristics and the associated frequency distributions for closed cases in Table 2 are very similar to those for admitted cases in Table 1 attests to a lack of selection bias due to participation refusals, moving out of the district, and so forth. Again, however, it merits noting that the number of closed cases in the experimental group with one or more prior delinquent court referrals is 23 as compared to only 13 for the control group -- and 6 closed experimental group

Table 2. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Frequency Distribution on Selected Characteristics for all Closed Cases as of May 1991.

	Experimental	Control	Total
Total Sample	53.1[a] (191)	46.9[a] (169)	100.0%(360)
District			
5, Wilmington	4.2[b] (8)	8.9[b] (15)	6.4[a] (23)
10, Raleigh	17.3 (33)	21.9 (37)	19.4 (70)
15A, Graham	5.8 (11)	4.1 (7)	5.0 (18)
18, Greensboro	23.5 (45)	21.3 (36)	22.5 (81)
19A, Concord/Salisbury	16.2 (31)	13.0 (22)	14.8 (53)
23, Wilksboro	8.4 (16)	7.7 (13)	8.1 (29)
27A, Gastonia	6.3 (12)	7.7 (13)	6.9 (25)
28, Asheville	18.3 (35)	15.4 (26)	16.9 (61)
Age			
7,8,10-12	12.4 (24)	6.5 (11)	9.8 (35)
13	14.8 (28)	17.8 (30)	16.1 (58)
14	37.8 (72)	42.6 (72)	40.0 (144)
15-16	35.0 (67)	33.1 (56)	34.1 (123)
Sex			
Female	67.0 (128)	68.6 (116)	67.8 (244)
Male	33.0 (63)	31.4 (53)	32.2 (116)
Race			
White	68.1 (130)	69.8 (118)	68.9 (248)
Black	29.8 (57)	30.2 (51)	30.0 (108)
Other	2.1 (4)	0.0 (0)	1.1 (4)
Reason Referred			
Runaway	52.9 (101)	55.0 (93)	53.9 (194)
Truancy	31.4 (60)	30.2 (51)	30.8 (111)
Ungovernable	15.7 (30)	14.8 (25)	15.3 (55)
Number of Prior Status Referrals			
0	80.6 (154)	85.2 (144)	82.8 (298)
1	13.6 (26)	10.6 (18)	12.2 (44)
2	4.2 (8)	3.0 (5)	3.6 (13)
3	1.6 (3)	1.2 (2)	1.4 (5)
Number of Prior Delinquent Referrals			
0	88.0 (168)	92.3 (156)	90.0 (324)
1	8.9 (17)	7.1 (12)	8.1 (29)
2	2.1 (4)	0.0 (0)	1.1 (4)
3	1.0 (2)	0.6 (1)	0.8 (3)

[a]As a percentage of total cases (360).
[b]As a percentage of total experimental cases (191).
[c]As a percentage of total control cases (169).

cases with two or more prior delinquent referrals as compared to 1 such control group case.

Outcome Evaluation: Difference-of-Means Analyses

Supervision-Period Comparisons. Table 3 is an updated version of the mean outcome comparisons of experimental and control groups contained in our March 1991 Interim Evaluation Report. The three outcome variables for which mean rates (of cases closed as of May 15, 1991) are reported in Table 3 are: the delinquent offense rate (DELOFF) computed as the percentage of cases in the group that had one or more court referrals for delinquent acts during the supervision period; status offense recidivism (STATOFF) computed as the percentage of cases in the group that had one or more status offenses reported during the supervision period; and overall success (SUCCESS) computed as the percentage of cases in the group for which the counselor's judgment is that overall the client successfully completed the supervision period.

Table 3 is arranged in three panels, each of which refers to an identifiable population of relatively homogeneous clients. Panel A reports the mean rates on the three outcome variables for both the experimental and control groups for those youth clients with prior court referrals for delinquent offenses, while Panel B displays the rates for youths with no prior delinquent court referrals. Because our previous reports have shown that Intensive Protective Supervision is more effective relative to Regular Protective Supervision for youths with no prior delinquent referrals, Panel B is of principal interest. For comparison with subsequent tables, Panel C also is defined for youths with no prior delinquent offenses -- but only for closed cases from the four original sites.

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Table 3. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Means (Percentages) on Three Outcome Variables for Period of Supervision Only for Closed Cases -- Experimental and Control Groups Compared.

Outcome Variables	Means in Experimental Group	Means in Control Group	Differences of Means	t-statistics (one-tailed p values)
Panel A. Youths with Prior Delinquent Offenses				
DELOFF	52.2	15.4	36.8	Sample sizes too small for significance tests.
STATOFF	39.1	23.1	16.0	
SUCCESS	60.9	61.5	-0.6	
N	23	13		
Panel B. Youths with No Prior Delinquent Offenses				
DELOFF	20.2	24.4	-4.2	-0.89 ($p < .20$)
STATOFF	19.6	22.4	-2.8	-0.62 ($p > .25$)
SUCCESS	66.7	60.3	6.4	1.20 ($p > .15$)
N	168	156		
Panel C. Youths with No Prior Delinquent Offenses -- Four Original Sites Only				
DELOFF	20.2	27.0	-6.8	-1.23 ($p < .15$)
STATOFF	20.2	27.9	-7.7	-1.39 ($p < .10$)
SUCCESS	68.6	60.4	8.2	1.66 ($p < .05$)
N	124	111		

Note: See text for definitions of the outcome variables.

It will be seen that Panel A (for youths with one or more prior delinquent offenses) reports higher mean rates on both the DELOFF and the STATOFF outcome variables for the experimental (Intensive Protective Supervision) than for the control (Regular Protective Supervision) group. This is consistent with the presence noted above of relatively more experimental than control group cases with two or more prior delinquent court referrals and the higher probability of delinquent recidivism of such casess. Because of this and the relatively small numbers of cases in this panel, further statistical analysis of Panel A is not appropriate.

More meaningful comparisons can be based on Panels B and C of Table 3 -- which are restricted to those youths with no prior delinquent offenses. With respect to the delinquent referral rate (DELOFF), Panel B shows a mean difference of 4.2 percentage points in favor of the experimental (Intensive Protective Supervision) group. This compares to a mean difference of 6.8 percentage points in favor of the experimental group reported in Panel C for the four original sites. On the status offense outcome variable (STATOFF), Panel B displays a 2.8 percentage point difference in favor of the experimental group, while this difference is 7.7 percentage points in Panel C. For the third outcome variable, the counselor's judgment of whether the supervision period was successfull overall (SUCCESS), Panel B shows an 6.4 percentage point difference in favor of the experimental group, while Panel C estimates this percentage point difference as 8.2. Several comments are in order regarding these percentage differences in the outcome variables between the two groups.

First, some concern was expressed in previous Interim Evaluation Reports (especially the October 1989 and February 1990 Phase II Reports) about the apparent deterioration in the mean percentage differences in the DELOFF and

STATOFF outcome variables compared to our June 1989 Phase I Final Evaluation Report (with cases closed as of May 1989). In our June 1990 Phase II Final Evaluation and October 1990 Phase III Interim Evaluation Reports, we then noted that this deterioration appeared to have ended. But, in our March 1991 Phase III Interim Evaluation Report, the trend towards convergence appeared to have resumed. From Panel B of Table 3, it can be seen that this new trend towards convergence of the mean outcome variables has continued during the last three months. That is, the percentage point difference on the DELOFF outcome variable in Panel B of Table 3 (4.2) is less than the 5.0 points reported in March 1991. For the STATOFF outcome variable, the percentage difference in Panel B (2.8) is less than that observed in our October 1990 Phase III Interim Evaluation Report (6.2) but slightly higher than the 1.9 percentage point difference reported in March 1991. The latter might appear to be a reversal of the trend towards convergence, but both the DELOFF and STATOFF percentage differences reported in Panel C of Table 3 (6.8 and 7.7, respectively) are less than these percentages in March 1991 (7.6 and 8.5).

In brief, for youths with no prior delinquent offenses, the evidence suggests that there has been a renewed degradation of differences between the experimental and control groups on the delinquent and status offense outcome variables. How can this degradation be explained? It appears to be due to a combination of <u>decreased</u> delinquent and status offense rates for the control (RPS) group (from on the order of 30 to 35 percent in October 1990 to on the order of 22 to 27 percent in Table 3) and, at least for the DELOFF outcome variable, an <u>increased</u> rate in the experimental (IPS) group (from about 14 percent in June 1989 to about 20 percent in Table 3).

The decreased delinquent offending rate in the control group is consistent with field-based observations and interviews reported in our June 1990 Phase

II Final Evaluation Report -- which suggested that some Regular Protective Supervision Counselors were attempting to use "experimental" methods in their work. The increased delinquent offending rate in the experimental group may be due to one or more of several factors, such as:

-- staffing changes among the IPS counselors at some sites;

-- some decline in enthusiasm among these counselors as the novelty of the IPS process declined and the program became a routinized part of the juvenile court bureaucracy (a not unusual outcome in human services experiments);

-- some greater awareness of (and discounting about the seriousness of) the Intensive Protective Supervision treament procedures among juvenile status offending populations in experimental site areas;

-- and/or other systematic or random factors of which we are not aware. Additional analyses reported below will further probe this apparent degradation of the difference in the experimental and control group outcomes.

Second, none of the mean percentage differences in Panels B or C in Table 3 reach conventional levels of statistical significance. On the other hand, the 4.2 mean difference in the delinquent offense outcome variable in Panel B (youths with no prior delinquent offenses) does represent approximately an 17.2 percent reduction in the rate of occurrence of this type of behavior as compared to that of the control group. This continues to be large enough to be of possible clinical (i.e., treatment) and policy significance. It is rare in juvenile justice to find programs that reach this order of magnitude of effect. In addition, there is some evidence that early intervention -- before status offenders have been referred to the juvenile courts for delinquent offenses -- is more likely to have this effect in reducing delinquency.

Third, it should be observed that the overall tendency of experimental (IPS) Counselors to judge their youth clients as having successfully completed

the supervision period at higher rates than the control (RPS) Counselors -- noted in our previous evaluation reports -- continues to be apparent in Panels B and C of Table 3. This tendency, however, has declined from on the order of a 20 to 25 percentage point difference in Phase I reports to on the order of a 6 percentage point difference in Panel B of Table 3. Consistent with the remarks made above, this decline is due not primarily to a decrease in the rate at which the IPS Counselors judge their cases to be successful (for Panel B youths, this rate was about 71 percent in our June 1989 Phase I Final Evaluation Report versus 67 percent in Table 3), but rather to an increase in the rate at which RPS Counselors judge their cases to be successful (from 49 percent in the July 1989 Report to about 60 percent in Table 3).

Cumulative-Period Comparisons. The outcome variables for which group-specific means are reported in Table 3 are defined only for the period of supervision (Intensive or Regular) -- which typically is on the order of six months. A related question about the impact of the experimental treatment pertains to whether it has a continuing effect after the supervision period has ended (see comments by McCord, 1990, on the Land et al. 1990 publication of results from the Phase I Final Evaluation Report). Analogously, since the supervision-period effects have been reported in Table 3, one can monitor the DELOFF and STATOFF outcome variables after supervision has ended and combine these post-supervision-period results with those of Table 3 to obtain cumulative outcome comparisons.

This is the type of comparison of outcomes reported in Table 4 -- which gives the cumulative means on the outcome variables and mean differences for the same groups as in Table 3 for the combined period of supervision and a post-supervision follow-up period of up to one year after the cases are closed. Because only closed cases from the original four sites have been in

Table 4. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Means (Percentages) on Three Outcome Variables for Four Original Sites Only for Period of Supervision and Up to One Year After for Closed Cases -- Experimental and Control Groups Compared.

Outcome Variables	Means in Experimental Group	Means in Control Group	Differences of Means	t-statistics (one-tailed p values)
Panel A. Youths with Prior Delinquent Offenses				
DELOFF	60.0	10.0	50.0	Sample sizes too small for significance tests.
STATOFF	45.0	30.0	15.0	
SUCCESS	65.0	70.0	-5.0	
N	20	10		
Panel B. Youths with No Prior Delinquent Offenses				
DELOFF	24.2	33.3	-9.1	-1.54 ($p < .10$)
STATOFF	25.8	34.2	-8.4	-1.40 ($p < .10$)
SUCCESS	68.6	60.4	8.2	1.66 ($p < .05$)
N	124	111		

Note: See text for definitions of the outcome variables.

the experiment sufficiently long to qualify for this type of comparison, the cases compared in Table 4 are restricted to these four sites.

It can be seen from Panel A that the only difference from Table 3 is in the slightly higher DELOFF rate for the experimental group (60 percent as compared to 52.2 percent in Table 3). This is consistent with the proposition that youths with prior delinquent offenses are likely to commit delinquent offenses early -- and thus have their cases closed during the supervision period.

On the other hand, the mean difference on the DELOFF outcome variable in Panel B of Table 4 is more than twice the corresponding difference in Table 3 (9.1 versus 4.2 percentage points), and this mean difference is of marginal statistical significance. It has a probability-value (p-value) of less than 0.10 on a one-tailed significance test. In other words, on the presumption that the Intensive Protective Supervision treatment should reduce the delinquent referral rate in the experimental group as compared to the control group, a mean difference of the magnitude reported in Panel B of Table 4 would occur by chance less than ten times out of one hundred if the true mean difference were zero.

These results imply that some of the youths in this panel progress to delinquent offenses during the post-supervision period and that those in the control group do so at higher rates than those in the experimental group. Thus, the experimental (Intensive) treatment appears to have a more lasting impact on the delinquent offense rate than does the control (Regular) procedure. This conclusion is also supported by the fact that, during the post-supervision follow-up period, control group youths were involved in delinquent incidents at about twice the frequency of youths from the experimental group (13 incidents in the control group versus 7 in the

experimental group). That is, a given referral to the juvenile court may involve more than one delinquent incident, and in this case youths in the control group referred for delinquent offenses had been involved in nearly twice as many such reported incidents.

For the STATOFF outcome variable, Panel B of Table 4 also reports a mean percentage point difference of 8.4 in favor of the experimental group. This difference also is of marginal statistical significance -- that is, likely to have occurred by chance only 10 times out of 100 if the true difference between the groups were zero. Thus, experimental (Intensive) Protective Supervision appears to have a more lasting effect on status offense recidivism than does the control (Regular) procedure.

Offense-Specific Comparisons. To further analyze the foregoing differences, Table 5 reports additional supervision-period breakdowns of the DELOFF and STATOFF rates, while Table 6 displays the corresponding cumulative (supervision-period plus up to a one-year follow-up period) results. In other words, Table 5 is an offense-specific analogue of Table 3 and Table 6 is the offense-specific analogue of Table 4. In each case, the DELOFF rate is disaggregated into FELONY and NONFELONY (misdemeanor, traffic, and city ordinance violations) categories and the STATOFF rate is decomposed into RUNAWAY and TRUANCY categories.

As was the case with the comparisons in Tables 3 and 4, the results in Tables 5 and 6 demonstrate modest differences in favor of the experimental treatment group for the supervision-period and, for most comparisons, larger, more statistically significant differences in the cumulative-period comparisons. It also can be seen from these tables that the primary cumulative impacts of the experimental (IPS) procedures relative to the control (RPS) procedures are a lower NONFELONY offense rate and lower RUNAWAY

Table 5. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Means (Percentages) on Felony, Misdemeanor, Runaway, and Truancy Outcome Variables for Period of Supervision Only for Closed Cases -- Experimental and Control Groups Compared.

Outcome Variables	Means in Experimental Group	Means in Control Group	Differences of Means	t-statistics (one-tailed p values)
Panel A. Youths with Prior Delinquent Offenses				
FELONY	21.7	7.7	14.0	
NONFELONY	30.4	7.7	22.7	Sample sizes too small for significance tests.
RUNAWAY	30.4	15.4	15.0	
TRUANCY	17.4	7.7	9.7	
N	23	13		
Panel B. Youths with No Prior Delinquent Offenses				
FELONY	3.6	3.9	-0.3	0.13 (p > .25)
NONFELONY	16.7	20.5	-3.8	-0.89 (p < .20)
RUNAWAY	14.9	18.0	-3.1	-0.74 (p < .25)
TRUANCY	4.2	5.8	-1.6	-0.66 (p > .25)
N	168	156		
Panel C. Youths with No Prior Delinquent Offenses -- Four Original Sites Only				
FELONY	4.0	5.4	-1.4	-0.49 (p > .25)
NONFELONY	16.1	21.6	-5.5	-1.07 (p < .15)
RUNAWAY	15.3	22.5	-7.2	-1.40 (p < .10)
TRUANCY	4.0	7.2	-3.2	-1.05 (p < .15)
N	124	111		

Note: See text for definitions of the outcome variables.

Table 6. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Means (Percentages) on Felony, Runaway, and Truancy Outcome Variables for Four Original Sites Only for Period of Supervision and Up to One Year After for Closed Cases -- Experimental and Control Groups Compared.

Outcome Variables	Means in Experimental Group	Means in Control Group	Differences of Means	t-statistics (one-tailed p values)
Panel A. Youths with Prior Delinquent Offenses				
FELONY	35.0	10.0	25.0	
NONFELONY	25.0	0.0	25.0	Sample sizes too small for significance tests.
RUNAWAY	35.0	20.0	15.0	
TRUANCY	25.0	10.0	15.0	
N	20	10		
Panel B. Youths with No Prior Delinquent Offenses				
FELONY	6.5	8.1	-1.6	-0.48 ($p > .25$)
NONFELONY	17.7	25.2	-7.5	-1.39 ($p < .10$)
RUNAWAY	19.4	25.2	-5.8	-1.07 ($p < .15$)
TRUANCY	5.7	10.8	-5.1	-1.43 ($p < .10$)
N	124	111		

Note: See text for definitions of the outcome variables.

and TRUANCY rates. By comparison, the cumulative FELONY rates show only a small difference.

Before moving on to other analyses, it should be noted that the foregoing inferences based on Tables 3 to 6 presume that status and delinquent offenses either have been accurately and completely reported for youths who participated in both the experimental and control groups or, if the records are incomplete, they do not reflect a differential bias towards either group. That is, if offense reports are missing, it must be assumed that they are missing at random between the two groups. We have no way of knowing with certainty whether or not this is a valid presumption, and, indeed, it probably is impossible to know in some absolute sense. On the other hand, efforts have been made by Administrative Office of the Courts personnel to ensure an accurate and complete reporting of all offenses for youths in the IPS experiment, and field observations do not give any cause to suspect differential bias. Accordingly, in the absence of information to the contrary, we believe that the inferences made above are not artifacts of differential reporting.

Outcome Evaluation: Regression Analyses

Complete-Sample Results. Regression analysis provides another way of examining the data with respect to possible effects of the experimental treatment on the outcome variables. The advantage of regression analysis is that it allows us to control simultaneously for the effects of several client characteristics as well as the experimental treatment. Thus, regression analysis yields estimates of the partial effects of the experimental treatment as opposed to the main effects estimated in the mean difference tables.

Tables 7 and 8 report updated regression equations for the three outcome variables (DELOFF, STATOFF, and SUCCESS). Table 7 displays results defined on the supervision-period only, while Table 8 gives the comparable cumulative (supervision period plus up to one-year follow-up) results. Hence, the regressions of Table 8 are estimated on closed cases from only the original four experimental sites. Each of the equations in these tables merits comment.

As was the case in our June 1990 Phase II Final Evaluation Report, the DELOFF regression equations in Tables 7 and 8 continue to show statistically significant effects of the gender variable. That is, female youth clients are less likely to be referred to the courts for delinquent offenses -- during either the supervision or cumulative periods. As in the October 1990 Phase III Interim Evaluation Report, the prior delinquent offenses explanatory variable also has a statistically significant coefficient in Tables 7. But the coefficient for this variable in Table 8 is smaller and not statistically significant. This difference is due to the fact, noted above, that youths with prior delinquent offenses tend to be referred to the courts for new delinquent offenses earlier (i.e., while under protective supervision) than other youths.

On the other hand, the cumulative DELOFF equation in Table 8 shows a significant negative coefficient for the age variable -- which indicates that youths assigned to protective supervision (either RPS or IPS) at an older age are less likely to be referred to the court for a delinquent offense than youths assigned at a younger age. The age variable also has a significant coefficient for the supervision-period results in Table 7. It is plausible that these negative age effects are due to an "ageing out" decline in offending behavior of older youth clients.

Table 7. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Regression Analyses of Three Outcome Variables for Period of Supervision for Closed Cases: Metric Regression Coefficients, t ratios (in parentheses), and Standardized Regression Coefficients in brackets].

Independent Variables	Outcome Variables: DELOFF	STATOFF	SUCCESS
Group (exper.=1,control=0)	-.008 (0.180) [-.009]	-.014 (0.315) [-.017]	0.059 (0.742) [0.039]
Age (years) at last birthday at entry into protective supervision	-.038 ** (1.844) [-.097]	-.035 ** (1.735) [-.092]	0.008 (0.228) [0.012]
Sex (female=1,male=0)	-.107 ** (2.229) [-.117]	0.106 ** (2.248) [0.120]	0.166 ** (1.941) [0.103]
Race (black=1,nonblack=0)	0.076 * (1.568) [0.082]	-.025 (0.531) [-.028]	-.184 ** (2.129) [-.113]
Prior Delinquent Offenses (1=priors,0=none)	0.138 ** (1.859) [0.097]	0.142 ** (1.933) [0.102]	-.015 (0.112) [-.006]
Intercept	0.808 ** (2.791)	0.642 ** (2.247)	0.428 (0.832)
R^2	.049	.028	.026
N=360			

* p (one-tailed) < .10
** p (one-tailed) < .05

Table 8. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Regression Analyses of Three Outcome Variables for Four Original Sites Only for Period of Supervision and Up to One Year After for Closed Cases: Metric Regression Coefficients, t ratios (in parentheses), and Standardized Regression Coefficients [in brackets].

Independent Variables	Outcome Variables: DELOFF	STATOFF
Group (exper.=1,control=0)	-.033 (0.611) [-.036]	-.061 (1.076) [-.066]
Age (years) at last birthday at entry into protective supervision	-.039 * (1.511) [-.091]	-.023 (0.865) [-.054]
Sex (female=1,male=0)	-.249 ** (4.109) [-.249]	0.117 ** (1.845) [0.115]
Race (black=1,nonblack=0)	0.062 (1.075) [0.064]	-.065 (1.085) [-.067]
Prior Delinquent Offenses (1=priors,0=none)	0.086 (0.984) [0.059]	0.141 * (1.550) [0.097]
Intercept	1.009 ** (2.773)	0.593 * (1.562)
R^2	.093	.028
N=265		

* p (one-tailed) < .10
** p (one-tailed) < .05

One difference in Tables 7 and 8 relative to regression results in the March 1991 Phase III Interim Evaluation Report is that race of client reaches marginal statistical significance -- indicating a slight increase in probability of recidivism for black youth clients -- for the supervision period but not for the cumulative period data. This is consistent with our earlier reports, but the race variable was not even marginally significant for either period in the March 1991 report.

Also consistent with earlier reports, the experimental treatment variable, while having the expected effect in reducing delinquent referrals, does not reach conventional levels of statistical significance in either Table 7 or Table 8.

In our June 1990 Phase II Final Evaluation Report, only one explanatory variable, client's gender, attained marginal statistical significance in the regression equations for the STATOFF outcome variable. This variable has increased statistical significance in Tables 7 and 8. In brief, being female increases the probability of a client being reported for status offenses either while under protective supervision or during the cumulative period.

In addition, age and prior delinquent offenses now are statistically significant in the STATOFF outcome variable for supervision-period results in Table 7 -- the former in a negative and the latter in a positive direction, respectively. By comparison, in the cumulative STATOFF equation of Table 8, the prior delinquent offenses variable is of only marginal statistical significance in the positive direction and age is not statistically significant. In its place, race of youth client has a marginally significant relationship to the status offense rate.

The regression equation for the SUCCESS outcome variable in Table 7 shows results similar to those of the June 1990 report, with sex and race of client

strongly predictive of outcome judgments (females and nonblacks more likely to be judged successful). However, being in the experimental group is not significantly more likely to produce a judgment of success by the counselors, net of other regressor variables, in Table 7. This is consistent with the mean-difference comparisons reported in Panels A and B of Table 3 above.

Site-Specific Analyses. To ascertain the extent to which the foregoing results may be due to heterogeneity among the experimental sites, Tables 9 and 10 report parallel regression equations to those, respectively, in Tables 7 and 8 -- but with dummy-variable controls for the experimental locations. In these equations, Raleigh (District 10) is taken as the baseline or control location, and the effects on the outcome variables of the other sites are measured as deviations from Raleigh. Also, because only small numbers of cases have been closed in the four new experimental sites, only closed cases from District 18 (Greensboro), District 19 (Concord/Salisbury), and District 28 (Asheville) are included in the regressions.

It can be seen that the experimental site control variables drive the effect of the prior delinquencies and race variables to statistical insignificance in the supervision-period DELOFF equation in Table 9 as compared to Table 7. That is, after introducing controls for the sites, the effect of the prior delinquent offenses and race variables on the DELOFF outcome become statistically insignificant. As in Tables 7 and 8, however, the gender and age regressors retain their signficance in the DELOFF equations of Tables 9 and 10. But none of the site-specific control variables are statistically significant in Table 10 and only that for District 28 (Asheville) is marginally significant in Table 9. This indicates that the regression relationships to this outcome variable differs very little by experimental site.

Table 9. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Regression Analyses of Three Outcome Variables for Period of Supervision for Closed Cases Controlling for District: Metric Regression Coefficients, t ratios (in parentheses), and Standardized Regression Coefficients [in brackets].

Independent Variables	Outcome Variables DELOFF	STATOFF	SUCCESS
District 18 (Dist.18=1,others=0)	0.045 (0.649) [0.048]	0.046 (0.650) [0.048]	-.077 (0.566) [-.043]
District 19 (Dist.19=1,others=0)	-.088 (1.124) [-.081]	0.198 ** (2.502) [0.181]	-.034 (0.225) [-.017]
District 28 (Dist.28=1,others=0)	-.101 * (1.313) [-.098]	0.238 ** (3.059) [0.230]	0.068 (0.455) [0.035]
Group (exper.=1,control=0)	-.019 (0.359) [-.022]	-.066 (1.247) [-.075]	0.070 (0.695) [0.043]
Age (years) at last birthday at entry into protective supervision	-.048 ** (1.931) [-.118]	-.008 (0.327) [-.020]	0.025 (0.526) [0.033]
Sex (female=1,male=0)	-.138 ** (2.381) [-.146]	0.115 ** (1.969) [0.121]	0.268 ** (2.389) [0.149]
Race (black=1,nonblack=0)	0.064 (1.139) [0.071]	0.017 (0.294) [0.018]	-.162 * (1.474) [-.094]
Prior Delinquent Offenses (1=priors,0=none)	0.104 (1.217) [0.076]	0.151 ** (1.757) [0.110]	0.083 (0.504) [0.032]
Intercept	1.017 ** (2.900)	0.195 (0.549)	0.132 (0.194)
R^2	.083	.080	.043
N=265			

* p (one-tailed) < .10
** p (one-tailed) < .05

Table 10. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Regression Analyses of Three Outcome Variables for Period of Supervision and Up to One Year After for Closed Cases Controlling for District: Metric Regression Coefficients, t ratios (in parentheses), and Standardized Regression Coefficients [in brackets].

Independent Variables	Outcome Variables: DELOFF	STATOFF
District 18 (Dist.18=1,others=0)	0.036 (0.487) [0.036]	0.053 (0.722) [0.053]
District 19 (Dist.19=1,others=0)	-.061 (0.740) [-.053]	0.283 ** (3.427) ** [0.245]
District 28 (Dist.28=1,others=0)	-.087 (1.080) [-.080]	0.288 ** (3.524) ** [0.262]
Group (exper.=1,control=0)	-.030 (0.550) [-.033]	-.077 * (1.384) * [-.083]
Age (years) at last birthday at entry into protective supervision	-.039 * (1.514) * [-.092]	-.022 (0.843) [-.051]
Sex (female=1,male=0)	-.248 ** (4.081) ** [-.247]	0.115 ** (1.876) ** [0.114]
Race (black=1,nonblack=0)	0.037 (0.628) [0.039]	-.001 (0.018) [-.001]
Prior Delinquent Offenses (1=priors,0=none)	0.099 (1.105) [0.068]	0.087 (0.959) [0.059]
Intercept	1.039 ** (2.824) **	0.431 * (1.160) *
R^2	.103	.099
N=265		

* p (one-tailed) < .10
** p (one-tailed) < .05

In the STATOFF equations of Tables 9 and 10, the dummy-variable controls for Concord/Salisbury and Asheville are statistically significant and positive (thus indicating that these sites have higher status offense recidivism rates than the control site -- Raleigh). These site control variables also drive the Table 7 effect of age, but not those of prior delinquent offenses and sex, to insignificance. For Table 10, the site control variables drive the prior delinquencies effect of Table 8 to statistical insignificance but not that of sex. In addition, the group control variable in the STATOFF equation of Table 10 is negative and marginally significant, thus indicating that youths in the experimental group are less likely, net of the other variables, to recidivate with other status offenses in the cumulative period.

Finally, in the supervision-period SUCCESS equation of Tables 9, introduction of the site-specific controls reduces the effect of the race variable, but not that of sex, to marginal statistical significance. However, none of the site-specific controls or other regressors achieve statistical significance in the equation. In other words, net of the variables in the SUCCESS equation of Table 9, sex and race make a difference in counselor's judgments of whether or not the client successfully completed the supervision period -- with females more likely and blacks less likely to be judged successful. This may indicate counselor perceptions of greater (less) compliance and cooperativeness with their efforts on the part of females (blacks).

In brief, the most notable findings of adding the experimental site controls is that youth clients in the Asheville district are at marginally greater risk of delinquent offense recidivism, that youths in the Concord/Salisbury and Asheville districts are at greater risk of status

offense recidivism, and that the experimental group treatment effect becomes marginally statistically significant in reducing status offense recidivism in the presence of site controls for the cumulative period.

Predicting Successful Outcomes in Intensive Supervision

Based on previously reported field research conducted in our Phase II Evaluation Project (by Jay R. Williams), a number of characteristics of youth clients and/or their families that Intensive Protective Supervision Counselors believe to be predictive of a greater or lesser probability of successful outcomes of Intensive Protective Supervision (IPS) have been identified in previous Interim Evaluation Reports. These beliefs, however, have been based on informal observations and intuition on the part of the counselors. The question remains as to whether or not these characteristics actually could be used to identify which youth clients would benefit from assignment to the IPS program and which would not.

To evaluate whether or not these counselor judgments could be articulated and shown to be predictive of outcomes of Intensive Protective Supervision, we previously constructed a questionnaire, called the "Profile of IPS Clients and Their Families," and requested that the Intensive Counselors fill out the questionnaire for each case in their program that has been closed to date. To fix ideas, we asked each Intensive Counselor to think back to when a client became their case and to answer the questions in reference to what opinions they had about the client and their family within the first month of the assignment. With completed questionnaires now available for all previously closed cases, we continue to request that Intensive Counselors fill out the questionnaire for each case under their supervision -- except that we now

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request that this be done approximately one month to six weeks after they are assigned the case.

A total of 195 completed Profiles for closed Intensive Protective Supervision cases now have been returned by the Counselors -- including 165 from cases at the four original experimental sites. This compares with 135 completed Profiles available for our October 1990 Phase III Interim Evaluation Report. Each Profile consists of 47 items or continua of characteristics, with 5 equally-spaced boxes supplied for the counselors to rate the items for each youth client from one extreme to the other. For example, the first item is:

Runaway behavior is highly chronic ☐ ☐ ☐ ☐ ☐ Runaway behavior is nonexistent

Another item is:

Client is very hostile ☐ ☐ ☐ ☐ ☐ Client is not hostile at all

A complete listing of the items was included in an appended copy of the Profile as part of our June 1990 Phase II Final Evaluation Report.

Initially, these items were coded as rating scales with scores going from 1 to 5. Implicitly, this assumes that the counselors divide each "continuum of characteristics" in the Profile into equal intervals among the five boxes supplied for their ratings -- in other words, that the scales are "interval scales." This assumption has been found to be justified methodologically provided that the items can be grouped into unidimensional scales. Accordingly, a very important step in the analysis of the items of the Profile is an assessment of dimensionality.

For this purpose, we initially factor-analyzed all 47 items with a standard orthogonal principal components with varimax rotation algorithm. This yielded 11 significant factor dimensions (dimensions with eigenvalues of 1.0 or greater) accounting for 74.3 percent of the variation among all 47 items. Based on previous analyses of these factors reported in our June 1990 Phase II Final Evaluation Report, we expected that 4 of these 11 factors would be sufficiently unidimensional for further analysis. This expectation was corroborated.

Accordingly, we collapsed the original 11 factors into 4 unidimensional scales (containing 29 of the original 47 items), which we labeled, respectively, parents' deficiencies (comprising 12 items), juvenile's problems (comprising 9 items), juvenile/parents' schooling problems (comprising 16 items), and previous services (comprising 4 items) -- where, as noted in the Profile, the term "parent(s)" refers to the adult or adults who have responsibility for the youth clients. The first three of these scales contain one or more items than did the corresponding scales in previous reports. Hence, Table 11 contains a complete listing of the items belonging to each of the scales.

Of these four scales, the last (previous services) contains 4 questionnaire items dealing with agency services previously provided to the client and her/his family. The parents' deficiencies scale continues to contain items having to do with parental resources, cooperation with the intensive supervision program, and extent of care for the client. This scale also contains the items concerning parents' substance abuse (including alcohol) and parents' involvement in criminal behavior. The juvenile's problems scale comprises items pertaining to the chronicity of the juvenile's runaway and ungovernable behaviors, his/her being at risk of delinquency,

Table 11. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Factor-Based Scales and Their Component Items from the "Profiles of IPS Clients and Their Families" Instrument.

Scale	Component Items
Parent's Deficiencies	Parents are involved in criminal behavior
	Parents will not participate at all in current services offered
	Parents are substance abusers (other than alcohol)
	Parents are alcoholic
	Family has severe financial problems
	Parents are very immature
	Parents are alcohol abusers
	Parents are unwilling to cooperate with counselor
	Parents do not care about the client at all
	Parents are very apathetic
	Client has no place to call home (moves a lot)
	Client has no significant adult to provide support
Juvenile/Parent Schooling Problems	Client is at high risk to drop out of school
	Truant behavior is highly chronic
	Parents have no power in the family
	Parents are "worn out" -- no emotional energy to help their child
	Parents provide no discipline
	Parents do not have any skills to carry thru with services offered
	Parents have no control over their children
	Family is extremely "dysfunctional"
	Client is very dysfunctional at school
	Parents are enablers of client's truancy
	Parents are totally "helpless"
	Parents do not have any resources to carry thru with services offered
	Parents have no parenting skills
	Family has severe communications problems
	Client is very dysfunctional in the home
	Client will not cooperate at all
Juvenile's Problems	Runaway behavior is highly chronic
	Ungovernable behavior is highly chronic
	Client's peer group is into highly delinquent behavior
	Client's peer group is into highly chronic undisciplined behavior
	Client is at high risk for delinquent behavior
	Client is an alcohol abuser
	Client is a substance abuser (other than alcohol)
	Client runs away to things (e.g., friends, adventure) as opposed to running away from things (e.g., abuse, sexual exploitation)
	Client is alcoholic
Previous Services	Various services provided client previously
	Services previously provided client were not at all successful
	Various services provided client's family previously
	Services previously provided client's family were not at all successful

having delinquent peers, being an alcohol or other substance abuser, and running "to things" (as opposed to "away from" things). Finally, the juvenile/parents' schooling problems scale contains items on the chronicity of the truancy behavior of the juvenile, her/his risk of becoming a dropout, the parents' lack of parenting skills, power, and control, the dysfunctionality of the family, the juvenile's dysfunctionality in school, the parent's enabling of the juvenile's truancy, and the parents' being helpless and not providing discipline for the juvenile. Note that the last two scales divide the items nicely along the truancy versus runaway/ungovernable categories of status offenders.

After constructing the foregoing scales, we sought to assess their predictive ability with respect to the three outcome variables for the 166 closed cases in the experimental (IPS) group from the four original experimental sites -- for the supervision-period plus one year follow-up. In other words, we sought to assess the ability of the factor-based scales to increase our ability to predict failure or successful completion of intensive supervision. Results for these predictive analyses are reported in Table 12, which displays the estimates of regression models in which the foregoing factor-based scales are entered together with the demographic and court-related explanatory variables of the regressions previously reported in Table 8 (and Table 7 for the SUCCESS outcome variable; note that there is no dummy variable for experimental versus control group in the regressions of Table 12, as all cases are from the experimental group).

Relative to the demographic and court-related variables, it can be seen that both the client's sex and prior delinquent offenses are statistically significant in the DELOFF equation of Table 12. That is, females are less likely to be referred for delinquent offenses, while those with prior

Table 12. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Regression Analyses of Three Outcome Variables for Closed Experimental Group Cases Using Factor Score Variables from Counselor Profiles for Period of Supervision and Up to One Year After Metric Regression Coefficients, t ratios (in parentheses), and Standardized Regression Coefficients [in brackets]

Independent Variables	Outcome Variables: DELOFF	STATOFF	SUCCESS
Parents' Deficiencies	-.000 (0.169) [-.016]	0.001 (0.327) [0.032]	0.006 (1.145) [0.116]
Juvenile's Problems	0.019 ** (4.919) [0.366]	0.017 ** (4.160) [0.320]	-.008 ** (1.806) [-.146]
Juv/Parent Schooling Problems	-.001 (0.365) [-.036]	0.006 ** (1.728) [0.174]	-.014 ** (3.219) [-.340]
Previous Services	0.003 (0.549) [0.040]	-.004 (0.888) [-.067]	-.000 (0.025) [-.002]
Age (years) at last birthday at entry into protective supervision	-.015 (0.585) [-.042]	-.053 ** (1.995) [-.149]	-.002 (0.049) [-.004]
Sex (female=1,male=0)	-.142 ** (2.052) [-.151]	0.131 ** (1.803) [0.137]	0.036 (0.420) [0.034]
Race (black=1,nonblack=0)	0.027 (0.384) [0.027]	-.068 (0.940) [-.068]	0.025 (0.285) [0.022]
Prior Delinquent Offenses (1=priors,0=none)	0.236 ** (2.489) [0.181]	0.097 (0.976) [0.073]	0.056 (0.474) [0.037]
Intercept	0.092 (0.245)	0.137 (0.350)	1.457 ** (3.151)
R^2	.252	.203	.123
N=166			

* ** p (one-tailed) < .10
** p (one-tailed) < .05

delinquent offenses prior to protective supervision are more likely to be so referred. In addition, we find a powerful effect of the juvenile's problems scale in the DELOFF equation of Table 12 -- suggesting that high values on this factor-based scale are predictive of referrals for delinquent offenses during the supervision period. The effect of this scale also drives the marginally statistically significant effects of age and race in Table 8 to insignificance in Table 12.

In the STATOFF equation of Table 12, coefficients of the age and sex of youth client variables are statistically significant. In this equation, however, the marginally significant effect of prior delinquent offenses noted in Table 8 appears to be mediated by two of the factor-based scales -- juvenile's problems and juvenile/parent schooling problems.

By comparison, neither of the sex and race variables in the SUCCESS equation -- which were statistically significant in Table 7 -- are found to be significant in the corresponding equations of Table 12. In other words, the explanatory effects of these variables in predicting outcomes of the experimental treatment are entirely mediated by two factor-based scales -- juvenile's problems and juvenile/parent schooling problems.

Overall, it must be concluded that the factor-based scales add considerable explanatory power to the demographic and prior court history variables. For all three outcome variables, the coefficients of determination adjusted for degrees of freedom (R^2s) are increased by several magnitudes in Table 12 as compared to Tables 7 and 8. Specifically, the percentage of variance explained for the DELOFF variable in Table 12 is 2.7 times that in Table 8, the percentage for the STATOFF variable increases 7.25 times that in Table 8, and the percentage for the SUCCESS variable goes up about 4.7 times that in Table 7. It must be concluded that these results demonstrate that

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substantial improvements in predictive accuracy for case outcomes in intensive supervision can be obtained by taking into account juvenile clients' scores on the factor-based scales we have constructed.

Changes in Treatment Effectiveness -- Cross-Tabulation Analyses

In our March 1991 Phase III Interim Evaluation Report, we noted new evidence of a tendency towards deterioration of the experimental treatment. Specifically, the difference in the effectiveness of IPS relative to RPS seems to have been greater for youth clients who were under protective supervision during the first year-and-a-half of the experiment (roughly November 1987 to May 1989) than those who were under supervision during the second year-and-a-half (roughly June 1989 through December 1990). In other words, mean differences in the outcome variables were larger for the "early" project participants than for the "late" participants.

Another mode of analysis of these changes is displayed in Table 13 which contains cross-tabulations of the DELOFF outcome variable (supervision-period only) for the first 50 closed cases in each of the experimental and control groups in the top panel and the last 50 closed cases in each group in the bottom panel (to maximize comparability, only cases from the four original experimental sites are included in the table). As all of the 100 cases in the top panel were under protective supervision during the "early" phase of the project (the first year-and-a-half) and all 100 cases in the bottom panel similarly were under supervision during the "late" phase (the last two years), these cross-tabulations are appropriate for assessing early vs. late effectiveness of IPS relative to RPS.

In the top panel of Table 13, it can be seen that, relative to the goal of reducing delinquent court referrals of youths under protective supervision,

Table 13. North Carolina Court Counselor's Intensive Protective Supervision Experiment: Crosstabulations of DELOFF Outcome Variable by Experimental vs Control Group for Four Original Sites Only: Early (First Year and a Half) and Late (Second Year and a Half) Comparison.

	Early Experimental	Early Control
No Delinquent Offenses	44 (88.0%)	34 (68.0%)
One or More Delinquent Offenses	6 (12.0%)	16 (32.0%)
Total	50	50

	Late Experimental	Late Control
No Delinqent Offenses	38 (76.0%)	36 (72.0%)
One or More Delinquent Offenses	12 (24.0%)	14 (28.0%)
Total	50	50

the experimental (IPS) treatment was quite effective during the early period of the project: the ratio of youths who completed supervision with no delinquent referrals to those with one or more referrals was 7.33 (88% to 12%) in the early experimental group as compared to 2.13 (68% to 32%) in the early control group. By contrast, the corresponding ratio in the late experimental group was 3.17 (76% to 24%) and that in the late control group was 2.57 (72% to 28%). As was noted earlier in the difference-of-means analyses, the cross-tabulations in Table 13 exhibit both an increase in the effectiveness of the control (RPS) treatment and a decline in the effectiveness of the experimental (IPS) treatment.

Cross-tabulations for the other two outcome variables (STATOFF and SUCCESS) show similar patterns of change in the project outcomes for early versus late comparisons.

We already have observed that some improvement in the effectiveness of the RPS treatment could be associated with RPS counselors learning and adopting "experimental" procedures. The decline in effectiveness of the IPS treatment is more puzzling.

To examine the possibility that some of this decline is due to changes in IPS personnel that have occurred at some of the sites, we computed cross-tabulations like those in Table 13 for a site that has had experienced and stable staffing of the IPS counselor position throughout the project -- District 10 (Raleigh). Again, effectiveness declined for the late experimental period as compared to the early period. A further cross-tabulation of outcome variables for all closed cases from two districts with stable staffing throughout the three-year project period (District 10 - Raleigh and District 28 - Asheville) vs. two that experienced some personnel changes (District 18 - Greensboro and District 19A - Concord/Salisbury)

suggests that stability in counseling staff might account for a small part of the change in outcome effectiveness but not much. Finally, although the numbers of closed cases from the four new sites are not yet sufficiently large to draw strong conclusions, it appears that their outcome effectiveness is more like that of the "late" period of the four original sites than the "early" period of these sites.

Of the various hypotheses (to explain the decline in effectiveness of the intensive treatment procedure) stated earlier herein, the only remaining one is that there was some decline in enthusiasm on the part of the intensive counselors as the novelty of the IPS process declined and the program became a routinized part of the juvenile court bureaucracy. Based on the numerical analyses we have conducted and a description of the time sequence of project events and training seminars provided by Administrative Office of the Courts personnel, it is plausible that the development of the IPSP project and its procedures during the first year-and-a-half of the experiment -- with all of the attention from Administrative Office of the Courts personnel and the initial evaluation research project personnel --led to a higher level of enthusiasm and effectiveness among intensive counselors than that sustained more recently. This hypothesis is consistent with the apparent lower effectiveness of IPS in the four new sites -- where IPS counselors similarly have received special training in therapeutic procedures but have not benefited from the excitement of the "start-up" phases of the project.

In the realm of experiments involving human subjects, the tendency of outcome variables to react to <u>any change</u> in attention given to subjects is known as the "Hawthorne Effect." This is due to the fact that experimental subjects may take the fact that they have been singled out for extra attention

as indicative of interest in their personal welfare and respond with behavioral changes.

Conventional research designs attempt to control for the Hawthorne Effect on experimental subjects by use of a "control group," as in the present project. However, as Rossi and Freeman (1989, p. 248) note, in evaluation research experiments <u>every</u> aspect of the intervention delivery system can affect the outcome of the intervention. In particular, based on the cross-tabulation results noted above, it is plausible that, for IPS to achieve its maximum effectiveness, intensive counselors must receive continuing and periodic "shots" of training and the attention associated therewith. That is, it may be the case that the Hawthorne Effect has affected the "early" vs. "late" outcomes of the IPS project -- not through the experimental subjects (the youth clients), but rather at another level -- that of the intensive counselors. (This hypothesis of a Hawthorne Effect for intensive counselors also is explored in the draft chapter attached as Appendix A.)

At the level of the intensive counselors themselves, the flip side of the Hawthorne Effect is "counselor burnout" or decline in "extra" efforts to "save" the juvenile client from further status offending and/or delinquent behavior. While we have little evidence with which to test this possibility (as we were not commissioned to study the counselors), it is plausible that the effects of counselor burnout would be reflected in the assigning of services to the juvenile clients. Following this logic, it is significant that, for the first 100 cases (i.e., the early cases) in Table 13, intensive counselors assigned three or more professional diagnostic and/or therapeutic services to 62% of their cases compared to the regular counselors assigning three or more services to 24% of their cases. By comparison, for the last 100 cases (i.e., the late case) in Table 13, intensive counselors assigned this

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level of services to 42% of cases compared to 28% for the regular counselors. Again, there is a slight increase in the numbers of services assigned by regular counselors as they presumedly attempted to adopt "intensive procedures" during the latter part of the experiment. But, even more dramatically, there is a large drop in the frequency of assignment of services by the intensive counselors. Thus, on the assumptions that these behavioral changes in numbers of services assigned to the juvenile clients or their families reflect changes in intensive counselor efforts to change the behavior of the clients and that the latter reflects levels of counselor enthusiasm and morale, we surmise that there was indeed at least some substantial level of counselor burnout in the latter period of the IPSP experiment as compared to the early period.

Conclusion

With a steadily increasing number of closed cases, some of the findings of statistically and substantively significant differences between the experimental and control group clients as reported in our previous reports continue to hold up, whereas others do not.

First, perhaps most important is that we continue to find a clinically significant mean difference treatment (i.e., intensive supervision) effect on the important delinquent offense outcome variable for those youths with no prior delinquent referrals. Currently, our estimate for this group of youths is that membership in the Intensive Protective Supervision treatment group results in a reduction of about 17 percent in the occurrence of referrals to the court for delinquent offenses during the supervision period -- relative to the rate observed in the control (Regular Protective Supervision) group. For the cumulative period (supervision period plus up to a one-year follow-up),

this reduction is on the order of 27 percent. Experimental treatment effects on this order of mangnitude in juvenile and criminal justice research generally are considered of both policy and clinical (i.e., case treatment) significance.

Second, youths with prior delinquent court referrals are likely to recidivate with new delinquent referrals early (i.e., during the protective supervision period) regardless of group membership (experimental or control).

Third, experimental (IPS) treatment appears to have a more lasting effect in reducing delinquent and status offense referrals than control (RPS) procedures.

Fourth, the primary cumulative impacts of experimental relative to control procedures are lower nonfelony delinquency, truancy, and runaway recidivism rates.

Fifth, with respect to counselor judgments of whether the protective supervision assignment was successful overall for a client, we continue to find that the Intensive Protective Supervision Counselors tend to rate a higher percentage of their clients as successful than do the Regular Protective Supervision Counselors. At the same time, however, it should be noted that this tendency has declined by more than 75 percent as compared to that observed in the Phase I evaluation -- perhaps indicative of more realistic assessments of the clients by the Intensive Counselors -- and also becomes statistically insignificant when other youth characteristics are controlled.

Sixth, in our efforts to estimate optimal predictive regression equations for the outcome variables, we find the following variables are predictive of youth clients being referred to the court for delinquent offenses either during supervision or in the cumulative period: being male and younger at the

time of entry into protective supervision. Being black and having been referred to the courts for prior delinquent offenses also is predictive of delinquent offenses during the supervision, but not the cumulative, periods.

By comparison, being female is the most consistently significant predictor of status offense recidivism during or after the supervision period. Other factors that affect this outcome variable are: being younger, having prior delinquent referrals, and being resident in the Asheville or Concord sites. Interestingly, after controlling for experimental site, being a member of the experimental group has an impact in reducing the status offense recidivism rate.

For counselors' judgments of clients' having successfully completed the supervision period, the most important predictor is being female -- with being nonblack also of slight significance.

Seventh, our efforts to develop scales based on counselor assessments that can be used to improve predictions of outcomes of intensive supervision continue to be promising. Multi-item scales comprising counselor assessments of parents' skill and resource deficiencies, juvenile's personality, interactional, and behavioral problems, and juvenile/parents' schooling problems are successful in substantially increasing our ability to predict outcome variables for those youths assigned to Intensive Protective Supervision.

Eighth, comparisons of "early" vs. "late" outcomes for the experimental and control groups suggest that, in order for IPS to achieve it maximum effectiveness relative to RPS, it may be necessary to provide IPS counselors with periodic training (in counseling and therapeutic procedures), attention, and morale boosting. The data are consistent with a hypothesis of a Hawthorne Effect on the enthusiasm of the intensive counselors during the early phase of

the project -- which, in turn, led to a greater frequency of assignment of larger numbers of services to the juvenile clients and an apparent corresponding reduction in progression to delinquent referrals for these youths. Equivalently, during the later phase of the experiment, there appears to have been a burnout on the part of the intensive counselors, leading to the less frequent assignment of services (and presumedly, less heroic efforts on the counselors' part) and a corresponding reduction in effectiveness of the intensive supervision procedures.

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